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CUBA FACES THE ECONOMIC REALITIES OF THE 1980s

A STUDY

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JOINT ECONOMIC COMMITTEE

CONGRESS OF THE UNITED STATES

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March 5, 1982

To the Members of the Joint Economic Committee:

I am pleased to send to you a study entitled, "Cuba Faces the Economic Realities of the 1980s." It is particularly timely in light of the President's recently announced Caribbean initiative. The study is one of several analyses of the Non-Market economies prepared in conjunction with the recently released JEC publication, "East-West Commercial Relations: A Dialogue with the Reagan Administration." We are most grateful to Dr. Alan Lenz, Director, Office of Trade and Investment Analysis, International Trade Administration, Department of Commerce, who conceived and directed the study. The analysis of the outlook for the Cuban economy was prepared by Lawrence H. Theriot, Office of East-West Policy and Planning, International Trade Administration, U.S. Department of Commerce. We are also very grateful for the assistance provided by Dr. John Hardt, Senior Specialist in Soviet Economics of the Congressional Research Service. Dr. Kent H. Hughes supervised the study for the Committee.

The study includes a description of the social achievements of the Cuban revolution as well as the deteriorating nature of the domestic Cuban economy. According to the study, Cuban integration into the Soviet trading bloc (CMEA) has failed to provide Cuba with the markets or the range of goods that would lead to a transformation of the Cuban economy. In fact, Cuban dependence on sugar exports has grown rather than diminished. In the author's view, further integration into the Soviet trading bloc over the next five years will do little to offset the impact of U.S. trade sanctions, solve the Cuban energy problem or stimulate investment in new industries. The outlook is for further austerity measures that could be exacerbated by either a short fall in Soviet oil production or a drop in earnings from sugar exports.

It should be understood that the views expressed in the study are those of the author and do not necessarily represent the views of the Joint Economic Committee or its individual Members.

Sincerely,

/Henry S. Reuss

Henry S. Reuss
Chairman

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PAUL S. SARBANES, MD.

February 26, 1982

Honorable Henry S. Reuss
Chairman
Joint Economic Committee
Congress of the United States
Washington, D.C. 20515

Dear Mr. Chairman:

I am pleased to send to you a study entitled "Cuba Faces the Economic Realities of the 1980s." The analysis of the economic outlook for Cuba was prepared by Lawrence H. Theriot, Office of East-West Policy and Planning, International Trade Administration, U.S. Department of Commerce. It is one of several studies that you requested in conjunction with the recently released JEC study, "East-West Commercial Relations: A Congressional Dialogue with the Reagan Administration." The study was supervised for the Committee by Dr. Kent H. Hughes.

All the views expressed herein represent those of the authors and do not necessarily reflect the views of the JEC or any of its Members.

Sincerely,

James K. Galbraith

James K. Galbraith
Executive Director

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CUBA FACES THE ECONOMIC REALITIES OF THE 1980s

Prepared by: Lawrence H. Theriot
Office of East-West Policy
and Planning
International Trade Administration
U.S. Department of Commerce

December 1981

This East-West Trade Policy Staff Paper should not be construed as a statement of U.S. Department of Commerce policy.

EXECUTIVE SUMMARY

The Cuban revolution has managed social achievements, especially in education and health care, that are highly respected in the Third World. However, the Castro regime has also burdened Cuba with a highly inefficient political and economic management system (basically the Soviet model) that is perpetuating serious problems.

In some areas, Castro's social successes have themselves generated growing economic problems. For example, the Cuban economy is increasingly incapable of producing jobs for the relatively well-educated, rapidly growing labor force.

Cuba's social successes have been possible only because of massive economic assistance provided by the Soviet Union, with the result that Cuba now relies on the U.S.S.R. and other members of CMEA for three-fourths of its world trade.

Notwithstanding its overwhelming trade dependence on CMEA, Cuba must continue to rely on Western export markets, especially for sugar, to generate hard currency to pay for the 20-30 percent of its imports obtained from the West. Noncommunist countries are still the only source for some major products, as well as the preferred source (given sufficient hard currency) for most of Cuba's imports.

The twenty year-old U.S. embargo has narrowly restricted Cuban gains from hard currency trade, both directly by foreclosing trade with Havana's natural partner, and indirectly by preventing trade with the West from achieving full potential. It has also forced dependence on distant CMEA suppliers whose unreliable delivery of a limited variety of generally poor quality products has retarded Cuban economic performance. Consequently, after a decade of integration into CMEA, the basic structure of the Cuban economy is unchanged and dependence on sugar has increased compared to pre-revolution levels. Perhaps most important, Havana must rely on subsidized Soviet imports for 99 percent of its oil needs.

During Cuba's first five year plan (1976-80), production in most key sectors fell far short of planned goals. Underemployment is rampant and labor productivity dismal largely because the revolution's key goal of economic equality has actually perpetuated an equalitarian austerity that offers workers little motivation.

Most of Cuba's economic problems are systemic and generally deteriorating. Popular expectations for economic improvement, heightened by dramatic comparisons offered by visiting U.S. relatives, have been and will continue to be frustrated. Although Cuba's economic problems are probably understood at the technocrat levels, the Castro leadership may not be fully aware of the potential implications for the long term survival of the revolution.

As in past periods of adversity, Cuba's response--as outlined in the 1981-85 plan--will be to rely even more on Soviet economic assistance to overcome chronic problems. But Moscow faces its own severe economic problems as well as heightened competing demands

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from its other allies for increased deliveries of key resources, especially oil and food. Thus, in the period to 1985, Castro for the first time most likely will confront a slow-down in the real volume of Soviet aid which may well peak and level off or perhaps even decline.

Oil is likely to be the key focus of concern for both Havana and Moscow. With production leveling off and deliveries to Eastern Europe fixed at 1980 levels, Moscow will be hard pressed to provide Havana the increased oil promised for 1985. Moreover, even with imports in promised volumes, Cuba will not be able to meet its minimal production goals for key sectors, including electrical power.

Further integration into CMEA will provide little relief for Cuba's other economic problems. Continued foreign trade dependence on sugar will insure that erratic swings in hard currency earnings will persist. As a result, investment for development of nonsugar industries and the availability of consumer goods will continue to stagnate. The added burden on limited hard currency resources of servicing Cuba's large debt ($2.6 billion) will also intensify as principal payments fall due in substantial volume.

Thus, assuming further integration into CMEA as planned, Cuba over the next five years faces more austerity--perhaps interrupted by small periodic advances as the sugar price swings upward. On the other hand, if shortfalls occur in Soviet energy supplies, an austerity scenario will prove the best outcome Havana can anticipate.

I. REVOLUTIONARY BALANCE SHEET

On his 54th birthday in 1980, Fidel Castro could reflect on twenty years of unique social experiment in the Western Hemisphere. At the outset, the Cuban revolution set lofty goals of socio-economic egalitarianism and gathered widespread support from most of the population with the promise of both an improved living standard and a new pride of nationalism.

After two decades, a comprehensive assessment of the Cuban economy is especially timely. First, Cuba's development model has attracted admiration in the Third World as having "solved" the multifaceted social, economic, and political problems of development.

Second Cuba has probably exhausted the gains as perceived by the population from installation of socialist egalitaranism and has become more and more deeply involved in and dependent on trade with and subsidies from far distant economies. Havana therefore faces crucial economic decisions in the next half decade which will set development prospects long into the future, including, probably the post-Castro generation.

Successes

The genuine socio-economic and political accomplishments of the Cuban revolution have attracted much international attention. These accomplishments include:

- A highly egalitarian redistribution of income that has eliminated almost all malnutrition, particularly among children.
- Establishment of a national health care program that is superior in the Third World and rivals that of numerous developed countries.
- Near total elimination of illiteracy and a highly developed multilevel educational system.
- Development of a relatively well-disciplined and motivated population with a strong sense of national identification.

Failures

While these achievements have been significant and are distinctive among LDCs, they have entailed substantial costs which have perhaps been less noted. Cuba's reliance on a centrally planned economy and a controlled society have resulted in systemic economic inefficiency

and political conflicts abroad, that have necessitated continuous, massive economic and military aid from its principal patron, the USSR. Notwithstanding $13 billion of Soviet aid over the last decade measured against conventional criteria, Cuba's economic performance has been poor as evidenced by:

- Dependence on massive infusions of Soviet economic aid to meet minimal investment and consumption needs.
- Real economic growth has barely exceeded population growth.
- Continued extreme dependence on sugar for development of the domestic economy and foreign trade resulting in stop-and-go progress closely tied to volatile swings in world sugar prices.
- Stagnant living standards, an oppressively inefficient bureaucracy, and poor labor productivity.
- Heavy reliance on trade within CMEA, where supply constraints and delivery problems severely compound economic management difficulties.
- Near total reliance on a single energy source--Soviet exports provide 98 percent of Cuba's oil and three-fourths of its total energy needs.

Moreover, some of the revolution's "accomplishments" have themselves generated adverse economic consequences which cause Havana increasing difficulties.

- The institutionalization of a Soviet type centrally planned economy has burdened Cuba with a vast administrative bureaucracy that stifles innovation, productivity, and efficiency necessary for economic advance.
- Cuba's economy, still dominated by agriculture, will be hard pressed to provide employment for a highly educated, labor force that is growing 3 percent annually. Frustration of new workers could continue to retard productivity.
- Centralized management of foreign trade has proved difficult to administer because of both the low priority afforded Cuba by its CMEA trade partners and their inflexibility in responding to any import requirements not anticipated in the annual trade plan, as will difficulties caused by the volatility in hard currency trade which remains dominated by sugar.
- After twenty years of accepting austerity and sacrificing present consumption for investment in future development, the Cuban people have a growing awareness that only their minimal needs are satisfied and that they face continued frustration in their expectations for improvement.

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- The egalitarian distribution of income has also served to eroded material incentives and dissipated labor motivation to the point where productivity is dismal.

- Cuba's aggressive international profile, emphasizing identification with violent revolutionary struggle in the Third World and its close association with Soviet foreign policy objectives, have prejudiced relations with the U.S. and other Western countries. As a result, the U.S. trade embargo has continued to narrowly restrict Havana's economic development options, necessitating an every growing dependence on CMEA, especially the USSR.

Foreign Trade Performance: CMEA Trade

The role of foreign trade in Cuban economic development can hardly be overemphasized. The island based economy is highly open to trade, with global exports and imports accounting for 34 and 36 percent, respectively, of Cuban GDP.

The trade impact of Havana's heavy reorientation from the U.S. to CMEA has been dramatic. Prior to the revolution, 75 percent of exports and 65 percent of imports were with in trade with the U.S. Twenty years later CMEA countries accounted for about 75 percent of Cuba's foreign trade, with Cuba's dominant trade partner, the Soviet Union, alone accounting for 65 percent of total trade turnover. (See Table 1).

Cuban trade within CMEA essentially involves a barter exchange of sugar, nickel, and citrus for a variety of raw materials, industrial equipment, and some consumer products, including food. The specific quantities of products traded with each country are prearranged in annual trade plans. Cuba's status as a developing country affords it highly subsidized trade prices from its CMEA partners.

During the 1970s, Cuban economic relations with CMEA were developed according to the principle of "international specialization". Unfortunately, that principle perpetuated and deepened Cuba's historic dependency on sugar which now accounts for 83 percent of Havana's global exports by value compared to 80 percent in 1957.

Hard Currency Trade.

Notwithstanding dominance by CMEA countries, especially the USSR, an essential portion of Cuba trade turnover in the last five years (averaging 25-30 percent) has been oriented to the West. Reflecting sharp swings in world sugar prices, Cuban hard currency earnings have fluctuated widely and made planning for imports from noncommunist countries difficult. After reaching $1.6 billion (70 percent from sugar)in 1975, hard currency exports declined to a low of $.8 billion in 1977 before rising to a new high of $1.8 billion in 1980. (See Table 2).

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Table 1

Million US $

Foreign Trade by Major Area

	1957	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Total exports, f.o.b.	818	691	1,050	861	840	1,372	2,707	3,572	3,284	3,669	4,545
Communist countries	42	529	778	557	451	880	1,532	2,401	2,484	3,056	3,855
USSR	42	323	529	304	244	567	981	2,011	1,998	2,602	3,320
Eastern Europe	NEGL	103	150	160	137	203	382	279	353	341	397
Far East	NEGL	103	99	93	70	110	169	111	133	113	138
Non-Communist countries	776	162	272	304	389	492	1,175	1,171	800	613	690
Total imports, c.i.f.	895	866	1,311	1,387	1,297	1,741	2,693	3,767	3,879	4,288	4,732
Communist countries	2	649	905	969	997	1,236	1,631	1,935	2,267	2,887	3,769
USSR	NEGL	428	691	731	779	965	1,240	1,513	1,818	2,341	3,083
Eastern Europe	2	98	125	143	126	149	208	304	356	452	537
Far East	NEGL	123	89	95	92	122	183	118	93	94	149
Non-Communist countries	893	217	406	418	300	505	1,062	1,832	1,612	1,401	963
Trade balance [a]	−77	−175	−261	−526	−457	−369	14	−195	−595	−619	−187
Communist countries	40	−120	−127	−412	−546	−356	−99	466	217	169	86
USSR	42	−105	−162	−427	−535	398	−259	498	180	261	237
Eastern Europe	−2	5	25	17	11	54	174	−25	−3	−111	−140
Far East	NEGL	−20	10	−2	−22	−12	−14	−7	40	19	−11
Non-Communist countries	−117	−55	−134	−114	89	−13	113	−661	−812	−788	−273

[a] Cuban trade with non-Communist countries is based on hard currency world prices while its Communist country trade uses soft currency negotiated prices which are frequently subsidized in Cuba's favor and do not reflect real market values. The result is a more favorable global trade balance than if Cuba conducted all of its trade at world market prices.

Sources: *Anuario Estadistico de Cuba*, (1972, 1976, 1978), *Boletin Estadistico* (1970), *Cuba: Economic Development and Prospects*, (Banco Nacional de Cuba, 1978), *Comercio Exterior* (1958).

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TABLE 2
CUBAN HARD CURRENCY TRADE AND DEBT
(Millions of U.S. $)

	1974	1975	1976	1977	1978	1979	1980 3/
Exports 1/	1067	1615	837	784	802	948	1664
Imports 2/	939	1572	1272	1334	948	1006	1409
Balance	128	43	-435	-550	-146	-58	155
Estimated Net Debt 4/	660	960	1330	2100	2400	2900	2600

1/ U.N. data, adjusted to include sugar exports to U.S.S.R. paid in hard currency.

2/ U.N. data, adjusted to exclude imports of Canadian wheat and flour paid for by U.S.S.R.

3/ Banco Nacional De Cuba, August 1981.

4/ Commerce Department estimates.

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In the face of gyrating export earnings, Cuban efforts to maintain minimal imports from hard currency countries crucial chemicals, industrial inputs, machinery and consumer goods have resulted in large trade deficits and forced Havana to bear an ever growing burden of hard currency debt. Since 1974 hard currency trade deficits totaling about one billion dollars have been financed by debt that reached to an estimated $2.6 billion by end year 1980

Importance of Hard Currency Exports to Cuban Economy

In spite of Havana's reliance on intra-CMEA trade, hard currency export earnings will continue to be a key determinant of Cuba's economic future.

- 30-35 percent Cuban foodstuffs must be imported and many products are either unavailable or in chronic short supply in CMEA.
- Many quality consumer goods, important to spur labor productivity, can be obtained only for hard currency.
- Many essential raw material inputs for nonagriculture industry must be imported from the West, e.g., synthetic textiles.
- High quality technology and machinery for agriculture and manufacturing sectors are generally not available in CMEA.
- Expanded hard currency earnings is desirable as a contingency to finance energy imports in the event of shortfalls in Soviet deliveries.
- Substantial hard currency is required to service Cuba's hard currency debt.
- Improved hard currency export performance is important to Cuba's efforts to attract Western foreign direct investment to develop new manufacturing industries.

Generating more hard currency is clearly a key task for the Cuban economy, but in the existing environment Havana's options are very limited. Cuba's $2.6 billion external debt, $1.7 billion of which

is owed Western commercial banks, is reaching its upper limits. Both Western banks and Western governments are reluctant to increase their lending exposure, particularly while Cuban political adventurism continues. With access to new loans limited, Cuba's hard currency resources will, for the forseeable future, be limited to earnings on exports to the West, limited income from tourism, and Soviet hard currency aid. A detailed outlook for Cuban hard currency exports and debt under alternative scenarios of increased integration with CMEA on the one hand and increased integration with the West on the other are presented below.

Impact of Trade Embargo

Effective management Cuba's foreign trade is a formidable task complicated on the one hand by the rigidities of trading within CMEA and on the other by the volatility of hard currency exports tied to swings in world sugar prices. These inherent complexities have also been aggravated by the 20 years of a U.S. trade embargo.

The dislocations precipitated in the 1960s by the forced restructuring of trade away from the U.S. market are well documented. The impact of the embargo may seem lessened over time as Cuba's industrial base was retooled with equipment supplied by CMEA countries and, since the mid 1970s, through trade with Western countries such as Japan, Canada and others.

However, the continued denial of Cuban access to U.S. trade and financial markets has effectively restricted the potential for trade and investment by other Western countries and narrowly circumscribed Havana's options for economic development, forcing increased dependence on CMEA. Thus, the U.S. embargo has been and continues to be not only a major, but a crucial impediment to Cuba's efforts at diversifying and expanding its hard currency trade, the key to improved economic growth and living standards. Indeed, it is fair to say that the U.S. embargo has condemned and will continue to condemn the Cuban economy to continued stagnation, with occasional temporary blips of modest improvement tied to the sugar price increases.

Domestic Economy: Performance vs. Plan

Cuba's foreign trade deficiencies have both resulted from and contributed to its domestic economic difficulties. Since 1975, Havana's economic planners have, with few exceptions, failed to maintain increases in production of key export products. Outputs of sugar, tobacco, fish, and nickel have been erratic in recent years and fallen far short of production targets set in 1976. Among major five-year plan goals, Cuba was successful in meeting production goals only for eggs and electric power. (See Table 3). Combined with volatile price fluctuations of key exports (especially sugar) the result has been wide fluctuations in but a general shortage hard currency available for investment to expand and diversify Cuba's export production base. The vicious circle therefore continues.

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TABLE 3

PRODUCTION AND GOALS OF MAJOR PRODUCTS
(Thousand Tons Unless Stated)

	1975	1976	1977	1978	1979	1980	1980 GOAL	1985 GOAL
Agriculture								
Export Crops								
Sugar	6314	6155	6485	7350	7992	6800	8000-87000	10-10500
Tobacco	41	51	46	40	33	20*	60	55
Citrus	182	199	178	198	186	NA	350-500	1300
Coffee	18	19	16	13	22	24	NA	46
Seafood	143	194	185	213	148	NA	350	165
Food Crops								
Rice	338	335	334	344	390	NA	600	640
Milk	591	682	722	783	791	NA	1000	1040
Pork	43	52	58	61	NA	NA	80	85
Eggs (Mn. dozen)	146	142	154	160	168	175	167	190
Beans	5	3	2	2	2	NA	NA	35
Industry								
Nickel	38	37	37	35	32	37	100	69
Electric Power (Mg Wh)	6583	7191	7707	8491	9391	NA	9000	1500
Steel	298	250	330	336	328	NA	440	1800
Cement	2083	2501	2656	2712	2650*	NA	5000	4900
Textiles (Million M²)	144	139	151	156	151	NA	260	325
Tires (1000 units)	368	266	172	294	NA	NA	NA	NA
Consumer Items								
Refrigerators (1000 units)	50	44	46	45	55	NA	100	75
Shoes (Mn. pairs)	23	21	15	18	18*	NA	35	29
Radios (1000 units)	113	92	120	121	143	NA	300	500

* Estimated.

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In his December 1980 report to the Second Party Congress, Castro described the Second Five-Year Plan 1981-85 as "realistic". The plan called for a five percent annual increase "general economic growth", with continued emphasis on export expansion and import substitution in order to reduce "foreign dependence". Overall investment will increase 15-20 percent over the five year period, down somewhat from the 1976-80 plan, and will be concentrated on completing projects already underway. Castro also claimed that the plan is "more responsive to the needs of the people" since real per capital income is set to increase 15-20 percent by 1985.To achieve that goal vis-a-vis an overall population growth rate of 1.6 percent, nominal economic growth will have to reach, 5.5-6.5 percent annually. Daily caloric intake per capita is scheduled to increase to 3,155, a level approaching that of the Soviet Union, from the current level of 2,800. Cuba's housing crisis is to be alleviated by construction of 40,000 new housing units each year compared to current annual production of 15,000 units.

Key export industries are scheduled for substantial growth in the five year plan. Once again, the 10 million ton sugar target has been set for 1985, a target requiring sharply increased output over the 1980 disease strickened crop of 6.8 million tons. Nickel and cement output is also scheduled to double

After sugar, probably the key indicator of feasibility in the Second Plan is the goal for electrical power, the essential input for much of the nonsugar economy. Installed generating capacity is to increase from the current 2,000 to 3,000-3,200 megawatts. New power plants apparently are to be thermoelectric, oil burning units, since work on the 440 megawatt nuclear plant "will continue" rather than be completed, according to Castro. In spite of the hoped for 50 percent increase in electrical generating capacity, Castro cautioned that "difficulties during peak periods" will continue through 1985.

Meeting these higher (but apparently minimal) power needs will be exceedingly difficult in view of a planned increase of only 22 percent in deliveries of Soviet oil to cover the needs of existing, as well as new, electric power plants. Furthermore, Castro noted without clarification, that only "a 10-15 percent growth in fuel is expected" over the five year period.

While the Second Five-Year Plan avoids the wildly optimistic targets set for the First Plan in 1976 and is, in this sense, "realistic", achieving the high output levels anticipated for 1985 in crucial sectors will require extraordinary increases in domestic productivity, unusual reliability in deliveries from the U.S.S.R. and plenty of old-fashioned good luck!

Cuban Leadership's Dilemma

After 20 years of social and economic experimentation the Cuban revolution now appears to confront a most uncertain period for sustaining its achievements. Cuba is still burdened with many of the rigid controls of a command economy modeled on the Soviet system

and tied to Moscow by massive subsidies. In addition, Havana faces unprecedented economic pressures in the areas of energy, productivity, and unemployment. Moreover, popular expectations for an improved living standard, while modest, have been stimulated by the relative prosperity of 1974-75, and increased awareness of the outside world capped by the mass arrival of obviously prosperous U.S. relatives during 1979-80.

In the past, consistent increases in economic aid from Moscow have allowed the Cuban leadership to postpone adjustment to the realities of economic development which Cuba, like all the non-oil developing countries, now confronts.

In theory, the Soviet economic model, adapted to Cuba, promised to eliminate the unemployment and inflation that plague market economies. But theory has not matched practice. Cuba faces substantial structural unemployment as its agricultural based economy is incapable of generating sufficient jobs to absorb a growing, relatively well educated, labor force. On the price side, suppressed inflation has long been evidenced by rationing, queueing for essential products and a widespread black market.

Having failed to deal with either unemployment or inflation, the Cuban leadership is experimenting once again. A new system of enterprise management is being implemented to reduce inefficiency and misallocation of resources by measuring economic performance by "realistic" standards of cost accounting and profitability. In another move toward decentralization, in April 1980 the state-run food distribution system was supplemented by free farmers' markets where prices 7-10 times higher than in state stores demonstrate the extent of shortage and suppressed inflation.

Economic reassessment and institutional revision have been attempted before as Havana searched for solutions in the mid-1960s and after the disastrous 1970 attempt to harvest 10 million tons of sugar. However, in past crises Soviet largesse has always been available to offset failures and defuse pressures for any substantial change in the system. But Cuba may be less fortunate in the 1980s, as its continuing economic difficulties may coincide with a leveling off of Soviet assistance forced by competing demands from other allies.

The results of the Second Party Congress confirm that in recent months the Cuban leadership has devoted substantial attention to economic issues and is searching more intently than ever before for options and alternatives. The outlook for Soviet assistance will, as in the past, be crucial to Cuba's economic future. Fidel Castro in his report to the Congress provided an optimistic assessment for economic relations with Moscow through 1985. Our more pessimistic assessment follows.

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II. SOVIET ECONOMIC ASSISTANCE: CURRENT STATUS

Cuba's economic ties to the USSR, the epitome of a client-patron relationship, have deepened significantly since the mid-1970s. Soviet economic assistance excluding military aid to Cuba has more than quadrupled since 1974, amounting to about $3 billion in 1979. (See Table 4). The sharp escalation in Soviet economic aid was necessitated on the one hand by continued (until early 1980) depressed sugar prices following the record high in 1974, and on the other, by sharp increases in oil prices.

Soviet aid has been dispensed to Cuba through a variety of means. However, since 1974, the key mechanism has been heavily subsidized prices favoring Cuba in trade between the countries. As a result of this subsidy system Moscow in 1979:

- Paid the equivalent of about 44 cents a pound--five times the world price--for 3.8 million tons of Cuban sugar.

- Paid the equivalent of $6,750 per ton--slightly above the current world price--for about 18,000 tons of Cuban nickel.

- Supplied virtually all of Cuba's 200,000 barrels per day (b/d) petroleum needs either directly (or indirectly through Venezuela) at $12.80 a barrel, about one-third the OPEC price of $35 per barrel.

The impact of these trade price subsidies is dramatically demonstrated if Cuban trade accounts are adjusted to eliminate their effects. (See table 5). Without subsidized prices from Moscow, Cuba's modest 1978 global trade deficit of $187 million would have been $2.8 billion.

In addition, Moscow has significantly augmented Cuban foreign exchange earnings in recent years with the reinstitution in 1975 of extra protocol hard currency purchases of Cuban sugar. These purchases, which are made at world prices, have totalled about $970 million over the 1975-79 period.

Cuban Dependence Overwhelming

The Cuban client role is reflected in its dependence on massive Soviet assistance to meet its basic consumption and investment needs. Cuba's general lack of exploitable natural resources, its semi-developed status, and its controversial foreign policies have combined to hamper Havana's ability to generate domestic investment capital or attract Western foreign investment. In recent years, Soviet support has been greater, and perhaps more crucial than ever, because of Cuba's deteriorating foreign payments situation and its ambitious foreign policy initiatives. For example, in 1979:

- The $3 billion in Soviet economic assistance equaled about one-quarter of Cuban GNP.

TABLE 4

CUBA: SOVIET ECONOMIC ASSISTANCE

Million US$

	Annual Average 1961-70	1971	1972	1973	1974	1975	1976	1977	1978	1979
Balance of Payments Aid	255.0	509	632	437	289	150	150	210	330	440
Trade and Development Aid	216.0	427	535	404	255	115	115	175	295	405
Interest Charges	16.6	57	69	0	0	0	0	0	0	0
Other Invisibles	22.4	25	28	33	34	35	35	35	35	35
Total Repayable Aid (Cumulative)	2550	3059	3691	4128	4417	4567	4717	4927	5257	5697
Subsidies	101.8	56	0	150	407	901	1357	1772	2638	2667
Sugar Subsidy[1]	101.8	56	0	97	Negl	580	977	1428	2435	2287
Petroleum Subsidy[2]	0	0	0	0	369	290	362	328	165	365
Nickel Subsidy[1]	0	0	0	53	38	31	18	16	38	15
Total Grants (Cumulative)	1018	1074	1074	1224	1631	2532	3889	5661	8299	10966
Total Economic Assistance (Cumulative)	3568	4133	4765	5352	6048	7099	8606	10588	13556	16663

[1]The sugar and nickel subsidies are estimated as the difference between the values of sugar and nickel exports to the USSR and the value of these exports if sold on the world market. They are considered a grant and not subject to repayment.

[2]The petroleum subsidy reflects the difference between the value of petroleum purchased from the USSR and the value of these imports at world prices. It is considered a grant and not subject to repayment.

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Table 5

Million US $

Foreign Trade Adjusted for Price Subsidies [a]

	Annual Average 1961-70	1971	1972	1973	1974	1975	1976	1977	1978
Total exports, f.o.b.	677	861	840	1,372	2,707	3,572	3,284	3,669	4,545
Less Soviet sugar and nickel subsidies [b]	102	56	0	150	38	611	995	1,444	2,473
Adjusted total exports	**575**	**805**	**840**	**1,222**	**2,669**	**2,961**	**2,289**	**2,225**	**2,072**
Total imports, c.i.f.	971	1,387	1,297	1,741	2,693	3,767	3,879	4,288	4,732
Plus Soviet oil subsidy [b]	0	0	0	0	369	290	362	328	165
Adjusted imports	**971**	**1,387**	**1,297**	**1,741**	**3,062**	**4,057**	**4,241**	**4,616**	**4,897**
Trade balance	−294	−526	−457	−369	14	−195	−595	−619	−187
Adjusted trade balance	**−396**	**−582**	**−457**	**−519**	**−393**	**−1,096**	**−1,952**	**−2,391**	**−2,825**

[a] Estimates based on official Cuban and Soviet trade data.
[b] See table 35 for derivation of Soviet price subsidies.

Sources: *Anuario Estadistico de Cuba* (1972, 1976, 1978), *Cuba: Economic Development and Prospects* (Banco Nacional de Cuba, 1978), *Vneshnyaya Torgovlya USSR* (1978).

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- The USSR purchased 72 percent of Cuba's $4.5 billion of exports, including 55 percent of Cuba's sugar exports and 50 percent of Cuba's nickel exports.

- The USSR accounted for three-fifths of Cuba's $4.7 billion of imports, including all of Cuba's petroleum imports, the bulk of its imported foodstuffs, and a major portion of its capital goods.

- The $125 million Soviet hard currency purchase of Cuban sugar accounted for about one-sixth of Cuba's hard currency export earnings.

On the Cuban domestic scene, over 160 industrial and other projects have been completed with Soviet aid. These projects account for 10 percent of total Cuban industrial production, including 30 percent of electric power output, 95 percent of steel production, 100 percent of sheet metal output, 12 percent of sugar milling capacity, and the bulk of Cuba's sugar harvest mechanization. Under the 1976-80 Five-Year Plan, the USSR assisted development of projects in the electric power, nickel, sugar, petroleum, ferrous and nonferrous metallurgical, building materials, and transport sectors. These were carried out with some $1.7 billion in Soviet aid extended at the beginning of the Five-Year Plan and overseen by an estimated 6,000 Soviet technicians in Cuba in compliance with an Intergovernmental Economic and Technical Cooperation Agreement.

Cost to the USSR

Viewed in macroeconomic terms, the burden to the Soviet economy of subsidizing its Cuban client appears to have been relatively insignificant. In 1979, Soviet economic support of $3 billion equaled only 0.4 percent of Soviet GNP. Even in the petroleum sector, Soviet deliveries to Cuba in 1979 accounted for only 2 percent of Soviet oil production, even though the total was equivalent to 13 percent of USSR exports to CMEA.

However, it is in terms of hard currency that the burden of supporting Havana is most usefully viewed. The hard currency costs to the Soviets have been rising sharply since the mid-1970s, and will likely continue to increase rapidly for the forseeable future. Over the 1960-73 period these costs amounted to a modest $1.5 billion, or only about $100 million annually, largely because of low world oil prices and Soviet reexport for hard currency of Cuban sugar after refinement in the USSR. (See table 6) Since 1974, however, soaring world oil and grain prices and the resumption of Soviet hard currency purchases of Cuban sugar (and simultaneous discontinuance of Soviet reexports) have driven hard currency costs steadily upward. Supporting Havana [redacted] cost Moscow $1.5 billion in 1979 in direct hard currency outlays or lost export earnings--the equivalent of about 6 percent of Soviet hard currency exports. Moreover, the future hard currency cost of Soviet aid can only increase in step with the growing opportunity cost of supplying oil to Cuba, rather than selling it for hard currency.

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TABLE 6
Soviet Hard Currency Costs 1/
(Millions of U.S. Dollars)

	1960-73	1974	1975	1976	1977	1978	1979 2/
Total	1,455	660	1,253	1,107	1,240	1,157	1,489
Petroleum	1,009	548	635	745	838	887	1,149
Wheat/Flour	575	98	155	150	179	118	155
Other grain	96	14	13	12	28	27	35
Sugar	-225	NEGL.	450	200	195	125	150

1/ Estimated direct cost of hard currency items purchased by the USSR from Cuba or from the West for delivery to Cuba and the earnings foregone by deliveries to Cuba of goods which could have been sold elsewhere for hard currency.

2/ Provisional

According to Castro, Moscow has "guaranteed" delivery of 61 million metric tons of crude oil and refined products during 1981-85, a 26 percent increase over the 48.5 million tons supplied 1976-80. While specifics on pricing are not available, the hard currency export earnings forgone by Moscow will be massive. For example, valued at a world market price of $35 a barrel, 61 million tons of oil would generate $15.5 billion in Soviet hard currency earnings. Similarly, if oil exports of 14.4 million tons promised Cuba in 1985 are actually delivered Moscow would forego $5.8 billion in hard currency earnings that year alone, assuming world oil prices rise to $55 a barrel.

Moscow's task in delivering the "guaranteed" 61 million tons of oil will be complicated by several factors:

- o Leveling off and possibly declining Soviet oil production.
- o Increased demand for oil by Soviet allies in CMEA, including Vietnam.
- o Continued Soviet reliance on exports of oil and refined products for nearly one-half of hard currency earnings.

Soviet oil problems will clearly have an important impact on all the CMEA countries. In 1980, the 11 million tons supplied Cuba comprised 13.7 percent of estimated Soviet exports to CMEA. Moscow has cautioned Eastern Europe to expect oil deliveries no higher than the 1980 level, (i.e. 81 million tons annually), for the 1981-85 period. If Soviet "guarantees" of 14.4 million tons in 1985 are actually delivered, exports to Cuba would rise to almost 18 percent of those to Eastern Europe.

In view of these foreign and domestic constraints, Moscow clearly faces uncertainties in meeting its "guarantees" of oil to Havana through 1985. Accordingly, annual Cuban-Soviet bilateral trade negotiations can be expected to become increasingly complicated and acrimonious in dealing not only with oil, but with all commodities that necessitate hard currency expenditure by Moscow. An unusual four months delay in signing the 1980 trade protocol may indicate the start of problems that are sure to become more contentious.

Soviet View of Cuba Burden

Faced with difficult choices, Moscow has been receptive to initiatives that could reduce the economic burden of Cuba. The Soviets worked for several years to arrange an oil swap whereby Venezuela supplied Cuba in 1979 with 10,000 bpd (about 5 percent of total imports). Moscow supplied equal amounts on behalf of Venezuela to European importers, particularly Spain. The swap saves the Soviets transport costs (split with Venezuela) but does not reduce the hard currency burden of foregone exports to the world market. Cuba pays the Soviets only the subsidized price (in sugar equivalent) for all oil imports, regardless of source. Both the Soviets and Cubans have reportedly discussed similar swaps with other Western hemisphere suppliers, but without conclusion thus far.

The Soviets have also urged both Washington and Havana to normalize trade relations in the expectation that restoration of a natural trade link would result in significant (albeit only vaguely perceived) economic gains for Cuba and thereby lessen the Soviet burden. Always hopeful to secure normalization on advantageous terms (i.e. Cuba's), the Soviets have thus far not pressured Havana to restrain its aggressive international profile.

Since the early 1970s, Moscow has been increasingly insistent that Cuban economic managers adopt "principles of scientific socialism." In 1974, Soviet technicians virtually authored Havana's first five-year plan and recently repeated the exercise for the 1981-85 second plan period.

Between 1974 and 79 Soviet trade turnover with Cuba rose from 28% to 43% of USSR trade with developing countries worldwide. Moscow may be increasingly concerned that Cuba is absorbing a disproportionate share and thereby retarding the development of Soviet relations and influence in other Third World countries.

Cuban Perceptions of Soviet Aid

While Fidel Castro and his colleagues are grateful for the Soviet assistance over the past two decades (without which the Cuban economy and, hence, the revolution could not have survived), they are also aware of the strings attached. Havana knows that its dependence on Moscow not only carries a degree of inherent control its foreign policy, but also limits options for economic development. They also must be aware that Moscow's "strings" on Havana are likely to tighten, as Soviet aid costs increase.

Economic Aspects

Cuba is fundamentally an economically weak, dependent client of the USSR. That dependence has become increasingly difficult to manage as Havana has found the reliability of its patron sometimes wanting. Deliveries of important raw materials and products have been chronically late and completion of major joint industrial projects lags far beyond planned objectives. In a centralized economy like Cuba, enterprises are often dependent on a single supply source for inputs with the output of one unit preprogrammed as the input for another. Disruption in delivery of important supplies from the sole source, therefore, has a widespread impact on economic performance.

Castro's now famous December 1979 economic speech provided graphic evidence of the systemic problems in Cuba-USSR trade. As always, Fidel lavished bountiful praise on Moscow's brotherly solidarity in "guaranteeing" access to cheap oil and purchase of expensive sugar. However, he chided the Soviets, and other CMEA trade partners, for failure to meet delivery schedules (e.g. for poultry and timber) thereby forcing the premature slaughter of beef cattle and disrupting housing construction. Said Castro, "we are beginning to believe what happened this year with timber could happen again."

Indeed, given the increasingly poor performance of the Soviet economy in meeting its own objectives for domestic industries, Cuba with its inevitably lower priority, seems certain of facing recurring supply shortfalls.

Castro also criticized the variety and quality of products available from CMEA, which makes satisfying consumer needs and boosting worker productivity difficult.

> Wouldn't it be better to get more towels and fewer TV sets? Of if only that could be!--but it is not a choice that can be made--the (CMEA) countries export to us products of which they have a surplus."

As the Cuban leadership reviews its development options over the longer term there is little evidence for optimism about the capacity and willingness of the USSR to supply economic aid at levels that do more than meet Cuba's most basic subsistence needs. But never hesitant, Havana will surely keep up the pressure on Moscow.

In summary, the Cuban revolution now faces an unprecedented array of economic and political uncertainties. In this atmosphere, the second Party Congress promulgated new initiatives designed to deal with Cuba's economic difficulties. However, effective solutions will require more radical departures from past practices than the Cuban leadership has been prepared to undertake thus far.

Key Economic Problems Restated

Cuba's key economic dilemmas (all to a degree interrelated) included the need to:

- o Diversify access to energy resources.
- o Diversify the production base away from sugar and expand hard currency exports.
- o Reduce the debt burden
- o Improve efficiency and productivity of the domestic economy.
- o Improve popular living standards.

The recent signing of an economic cooperation agreement with the USSR for 1981-85, predicting a doubling of trade over that of the 1976-80 period, and the results of the Second Party Congress, apparently reconfirm Cuba's commitment to seek solutions through further integration in CMEA and dependence on the USSR. However, the key question remains: is Cuba likely to find solutions to its economic problems in the CMEA bloc? Havana's prospects through 1985 are assessed below.

III. CMEA INTEGRATION: CUBAN PROSPECTS THROUGH 1985

Throughout the 1970's Cuban "integration" into CMEA was essentially a euphemism for dependence on the Soviet Union. Eighty-four percent of Cuba's 1978 CMEA trade turnover was with the USSR. (See Table 7). In the past, Cuba's preplanned sugar exports to CMEA at highly subsidized prices have provided an essential cushion against sharp swings in world sugar prices. Indeed, sugar prices have been the determinant of the direction of Cuba trade. When world prices reached a historic high in 1974, trade with CMEA comprised only 52 percent of Cuba's worldwide trade turnover measured on dollar terms. However, during the 1975-79 period of lower sugar prices, Cuba relied on CMEA for up to 72 percent of its trade turnover.

Oil is the key to Cuban reliance on the Soviet Union. Soviet oil exports provide 99 percent of Cuban oil needs. Thus, CMEA trade has provided Havana with insurance against disaster. However, because of its fundamental structure, CMEA integration is unlikely to generate the economic growth necessary to provide the average Cuban steady progress toward a better life and thereby insure that the essential political base for the revolution can be maintained over the long term.

Cuban Energy: Outlook in CMEA Integration

Energy Supply: Oil

The key component of Cuba's economic relationship with the USSR is the oil/sugar exchange. In 1980, the USSR supplied Cuba 11.1 million tons of oil (225,000 bpd.), 6.1 in crude and 5 in refined products. Cuban imports accounted for about 14 percent of estimated 1980 Soviet oil exports to the European CMEA countries. Oil imports from the USSR supply 98 percent of Cuba's oil consumption. Small domestic wells supply the residual 2 percent--about 5,000 bpd. Moreover, Soviet oil accounts for three-fourths Cuba's of total energy needs. Oil is the sole power source for electricity, cement and nickel. Alternative energy sources exist only in the sugar industry where cane pulp, or bagasse, which supplies much of the power for Cuba's 150 sugar mills and accounts for an estimated 20 percent of Cuba total energy consumption. Small amounts of natural and manufactured gas as well as hydro resources complete the Cuban energy supply picture.

Cuban Energy Costs

The pricing of Soviet oil shipments to Cuba is an enigma. Cuba is supposedly included in the intra-CMEA pricing mechanism which Soviet bases oil export prices on a five year 1979 moving average of world market prices. Using this method, the price of Soviet oil deliveries to CMEA buyers should have been about $15 a barrel. However, as a result of its preferential developing country status in the CMEA group, according to Fidel Castro in 1979 Cuba paid only $12.80 per barrel, a discount of 13%.

TABLE 7

CUBA TRADE TURNOVER WITH CMEA COUNTRIES
(Millions US Dollars and Percent)

	1974	%	1978	%	1979	%
Bulgaria	125.8	4.6	288.8	4.0	277.9	3.8
Czechoslovakia	113.7	4.1	138.9	1.9	171.9	2.3
GDR	40.4	1.5	189.5	2.6	356.4	4.8
Hungary	32.4	1.2	30.6	.4	133.3	1.8
Poland	28.5	1.0	74.4	1.0	104.6	4.8
Romania	13.7	.5	4.0	.1	39.8	.5
East Europe Total	354.5	12.9	726.2	10.0	1,083.9	14.7
USSR	2,166.3	78.6	6,121.9	84.0	6,221.5	85.3
Unallocated[1/]	236.6	8.6	442.8	6.1	-	-
Total CMEA[2/]	2,757.4	100	7,290.9	100	7,355.4	100
Cuba World Turnover[3/]	5,282.3		9,217.3		9,908.0	
% with CMEA		52.2		79.1		74.2
% with USSR		41.0		66.4		63.3

1/ Equals unexplained difference between sum of countries and official reported CMEA total.

2/ As reported in CMEA Statistical Yearbook except for 1979 for 1979 which is sum of reported country turnovers.

3/ As reported in CMEA yearbook except for 1979 which was reported by Banco Nacional de Cuba.

Because of these ambiguities, it is exceedingly difficult to determine Cuba's real cost of imported oil. Nevertheless, using the discounted CMEA price, imports of 11.1 million tons in 1980 cost Cuba the equivalent of $1.03 billion. What seems unambigious, however, is that the sugar/oil swap represents a highly subsidized economic lifeline to Cuba compared to the alternative of filling its oil needs for hard currency, at OPEC prices. The Cuban leadership, at least in public statements clearly expects that the Soviet lifeline will continue.

Regardless of the nominal price used, the real burden of oil payments on Cuba is lessened still further by a highly preferential trade pricing mechanism. Essentially, Cuba barters sugar for Soviet oil at prices set in annual bilateral trade negotiations. Since 1974, Moscow has relied on subsidized trade prices, rather than grants and loans, to channel massive economic aid to Havana. As oil prices climb so does the Soviet aid transfer which, calculated at the World price level, reached an estimated $3 billion in 1980. Even more important to Cuba is the fact that the Soviet offered price for preplanned sugar imports is directly linked to the cost of oil exports, thereby affording Havana constant oil/sugar terms of trade. With the rising cost of oil based on the intra CMEA price mechanism, this linkage of sugar and oil prices has been a tremendous economic benefit to Cuba.

Outlook for Soviet Oil

According to Fidel Castro the U.S.S.R. has "guaranteed" oil shipments of 61 million tons to Cuba in the 1981-85 period. Oil exports to Havana are to rise slowly, reaching 14 million tons in 1985, including 400,000 tons for the new nickel production facility, which is scheduled then to be fully on line. Consequently, on line excepting new supplies for nickel, production, Cuba's oil resources in 1985 will be 22 percent above 1980 levels, representing an annual increase of 4 percent over the five year plan period; that is, if "guarantees" are kept.

Moscow has already cautioned their East European oil clients to expect no increases in deliveries beyond the levels supplied in 1980. The U.S.S.R. also faces growing demands for its own industry, for exports to other LDC allies (Vietnam, Ethiopia, etc.) and most importantly, for exports to the West. Oil and refined product exports currently provide more than half of total Soviet hard currency export earnings. Facing these multiple constraints Moscow clearly will have to make difficult choices in meeting oil deliveries scheduled for Havana.

Cuban Energy Demand

Cuba publishes little data on the composition of its energy demand. Consequently, a comprehensive energy use profile for all sectors of the economy cannot be constructed. However, a partial breakdown can be estimated from available information.

Electric Power

Approximately 25 percent of Cuban oil is used to power 2,000 megawatts of installed thermoelectric generating capacity. In 1979, Cuba generated 9,400 Gwh of electricity, equal to about one-third the output of New York City's Consolidated Edison Company. Some 70 percent of the electricity provided power to Cuban industry and government services, with only the remaining 30 percent going to household and small farm consumers.

Sugar Milling:

While sugar grinding is largely powered by burning sugar cane pulp or bagasse, fuel oil is a necessary catalyst in most sugar mills. In 1980, Cuba's 150 mills consumed 4,000 bpd of oil.

Autos:

With an automobile population of 250,000 (1 for every 40 Cubans) gasoline consumption represents a relatively small part of Cuba's total oil needs. Considering rationed gasoline consumption alone (20 gallons per vehicle per week), Cuban drivers use the oil equivalent of 12,000 bpd. However, the nonrationed parallel market gas sales probably boosts consumption to 20,000 bpd.

Other Industries:

Other key industrial users include the nickel industry which consumes 12,000 bpd to process 37,000 tons of niclel. Cuba cement production uses 9,000 bpd for an output of 2.7 million tons of cement.

1979 Partial Breakdown of Cuban Energy Use
(bpd crude equivalent)

Electric power	56,600
Sugar milling	4,000
Autos	20,000
Nickel	12,000
Cement	9,000
Total for above	101,600
Unaccounted residual	104,400
Total oil available	206,000

These key sectors account for only about half of the oil resources available to Cubain 1979. The remainder of Cuba's demand for oil based energy includes a variety of uses: fuel for the military, and the large merchant and fishing fleets, for the bus and truck transport fleets, for the railroads, including the extensive rail system servicing the sugar harvest, for production of LPG and kerosene for household use. Available data does not permit detailed estimates for each of these categories.

Nevertheless, Cuba's energy consumption patterns appear to be dominated by important users. With household energy consumption already at low levels, the impact of any oil delivery shortfalls on economic activity would be immediate. Timely oil deliveries in scheduled volumes from the USSR will therefore probably be essential to achieve the annual 5 percent economic growth rate called for in the 1981-85 economic plan. Indeed, that goal may be unattainable because it is based on a 50 percent expansion of electrical generating capacity, which is apparently not matched by an appropriate rise in oil supplied to power new plants.

Cuban Energy Alternatives in CMEA

Insuring that the Soviets meet delivery schedules for "guaranteed" oil exports is a highest priority for Havana and continued close political and economic alignment with Moscow is clearly a necessary condition (but maybe not a sufficient condition) to the Soviets maintaining the schedule. However, a deepening of Cuban integration into the CMEA bloc will also narrow Havana's already very limited options for dealing with any oil shortfalls that do occur over the next five years.

Free Market Imports

Because of the massive terms of trade subsidies that support Soviet oil deliveries, Cuba would face a heavy financial burden if forced to purchase oil on the world market for hard currency. To illustrate, replacing 1980 Soviet deliveries with free market oil at the current OPEC price of $35 a barrel would cost $2.84 billion, $1.8 billion more than the cost from the Soviets and $700 million more than Cuba's estimated record high 1980 hard currency export earnings. Thus, even in years of unusually high sugar prices, Cuba would face an impossible burden in financing oil imports, while maintaining other essential imports of food and industrial inputs as well.

Other Subsidized Oil Sources

While Cuba's vigorous pursuit of improved relations with Mexico, Iraq, and Libya has met some success, none of these countries seem likely to replace Moscow as a concessionary source for oil for Havana. Cuba receives about five percent (10,000 bpd) of its oil needs from Venezuela under a swap arrangement involving the U.S.S.R. and Spain. Oil is available to Cuba under this swap at the same subsidized price as direct imports from the U.S.S.R., with Moscow paying Venezuela the current world price. However, periodic discussions with Mexico on establishing a similar oil swap arrangement have not been conclusive and there is little or no prospect of subsidized oil from any source other than the U.S.S.R.

Conservation

The outlook for conservation is little better. According to Fidel Castro, during 1976-80 Cuba made great progress in increasing energy efficiency. For example, the 1980 harvest consumed 1 gallon of oil portion of cane ground compared to 2.1 gallons in 1976. Oil consumption for electric power generation improved to 296 grams of oil per Kwh, compared to 398 grams in 1958, and 314 grams in 1976. Since the bulk of Cuban oil consumption is in key economic sectors, e.g. industrial electric power generation, sugar harvest, transport, etc., further energy conservation measures probably would require substantial capital investments in technical modifications for industry and agriculture. Almost invariably, the know-how and equipment required would not be available in CMEA. Therefore, Cuba's limited hard currency resources, which are a constraint on all Havana's economic options, will likely impede Cuba's energy conservation efforts as well.

Domestic Oil Production

Cuba has long maintained (but never substantiated) the existence of significant oil resources offshore, but U.S. industry sources generally describe the prospects as marginal. The technology available in CMEA is incapable of exploring or exploiting oil at the offshore depths around Cuba.

Havana recently concluded a cooperation agreement with PEMEX, the Mexican oil enterprise, providing for joint exploration. The advanced technology needed for offshore exploration, (and ultimately production) is generally in short supply from non-U.S. sources. PEMEX is unlikely to allocate scarce resources in search of unpromising prospects for oil near Cuba.

Nuclear Power

In a December 1979 speech, Fidel Castro noted that "a substantial portion of Cuban electricity would be produced by nuclear plants in the future". However, that future seems distant. In 1972, the Soviets agreed to construct two 440 megawatt nuclear power stations in Cuba. When (if?) completed, these two units would provide the equivalent of 40 percent of Cuba's 1980 installed capacity.

However, work on the first plant has been plagued by numerous technical problems, probably compounded by the lower priority afforded the Cuban project than to the highly ambitious nuclear development program underway in the European CMEA countries. As a result the first 440 megawatt reactor (equal to 20 percent of Cuba's 1980 capacity) is not expected on line until the late 1980's. Installed nuclear thus is unlikely to be available during the crucial mid-1980s when Soviet oil availability is likely to be most unreliable.

Ethanol

Cuba would seem to be ideal for biomass energy development. Sugarcane is by far the most efficient raw material for producing ethyl alcohol which could supplement Cuban gasoline and diesel consumption. However, limited investment capital would be a key constraint on expanding Cuba's annual alcohol output of 770,000 liters. Additional resources are not likely to be provided by Moscow and hard currency resources are already overcommitted to other investment needs.

The conclusion seems clear that, assuming no change in Cuba's pervasive economic orientation to CMEA, Havana has essentially no viable alternative to continued dependence on Soviet supplied oil. However, the outlook for CMEA energy is uncertain and any shortfalls in Soviet deliveries would have serious affects on Cuban economic activity and living standards.

Economic and Foreign Trade Diversification

The key principle of CMEA economic integration has been to promote "international specialization", accomplished through coordination of economic development plans and by targeting investment and economic aid to those sectors in which each economy has a comparative advantage. The end result for Cuba has been a heavy concentration of investment and aid in traditional industries, especially sugar, nickel and citrus. The only essentially new industry developed under CMEA auspices is the fishing fleet.

Export Industries: Sugar Remains the Key to CMEA Trade

Although production in each of these key sectors has expanded beyond prerevolution levels, Havana's historical dependence on sugar has in fact increased. Sugar and its derivatives now account for 83 percent of Cuba's exports worldwide compared to 80 percent before the revolution.

The European CMEA countries imported 63 percent of Cuba's sugar production since 1975 (see Table 8). The USSR is the world's largest sugar producer and all the East European countries produce at least some sugar. Consequently, CMEA demand for Cuban sugar varies with swings in domestic production. When not consumed, excess imports from Cuba have usually been resold on world markets. In 1980, poor crops in Cuba and the USSR have forced the Soviets to import more than 3 million tons from the world market in addition to about 3 million tons from Cuba.

Reflecting a continued commitment to reliance on sugar, Havana has announced plans to boost production in stages to 10 million tons by 1985. Accomplishing what would be a 50 percent increase over average output of 6.5 million achieved in 1974-79 will be difficult, though not impossible.

TABLE 8

KEY CUBAN EXPORTS

Product	1974 Quantity	%	1975 Quantity	%	1976 Quantity	%	1977 Quantity	%	1978 Quantity	%	1979 Quantity	%
Sugar (000 Metric Tons) of which:	5185		5439		5744		6200		7269		7262	
to CMEA	2771	53	3708	68	3711	65	4421	71	4610	63	4681	65
to non-CMEA	2414	47	1729	32	2033	35	1779	29	2659	37	2581	35
Nickel (000 Metric Tons) of which:	34		31		35		34		35		33	
to CMEA	21	61	23	23	25	70	24	70	25	70	23	70
to non-CMEA	13	39	8	27	20	30	10	30	10	30	10	30
Tobacco (000 Metric Tons) of which:	16		14		15		NA		NA		NA	
to CMEA	2	13	2	13	2	13						
to non-CMEA	14	87	12	87	13	87						
Rum (000 Hectaliters) of which:	56		92		90		NA		NA		NA	
to CMEA	48	86	79	86	80	89						
to non-CMEA	8	24	13	24	10	11						
Citrus (000 Metric Tons) of which:	56		60		61		NA		NA		NA	
to CMEA	55	99	57	95	58	95						
to non-CMEA	1	2	3	5	3	5						

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However, finding export markets will be another story. Sugar supply and demand are likely to return to basic balance, if not in the 1980-81 crop cycle, then shortly after as a result of increased world sugar production, worldwide consumer price resistance, and the switch to alternative sweeteners (e.g. fructose). The pressure toward lower prices will only be marginally offset by increased use of sugar cane for ethyl alcohol production.

Indeed, world consumption of sugar is expected to grow no more than 1.5-2 percent yearly to 1985. Cuban production of 10 million tons by 1985 would represent annual increases of 6.6 percent in Cuban output. To expand exports, Havana will have to find new makets as well as increase Cuba's share of new existing markets, both difficult tasks made more so if the large U.S. market is still foreclosed.

Soviet requirements for Cuban sugar through 1985 are not likely to exceed the annual average 3.8 million tons imported in 1977-79. Indeed, the 1981-85 Cuban-Soviet agreement calls for yearly exports of 3.5 million tons. Moreover, as sugar prices decline, maintaining Cuba's terms-of-trade for Soviet oil stable will require Moscow to continue to increase sugar price subsidies. Otherwise, Cuba will face the prospect of reduced imports of Soviet nonoil products. Thus, Havana's interest in expanding sugar exports to the USSR could decline if other markets can be found.

Facing the higher cost of subsidizing food consumption of their own population, most East European countries are unlikely to willingly incur added burdens required to subsidize imports from Cuba. Annual sugar deliveries to Eastern Europe are thus likely to continue at past levels of 500,000 tons. Barring improved political relation with China exports to that market are also likely to remain stable at about 500,000 tons yearly. Domestic consumption in Cuba (rationed) should also remain at the 500,000 ton level. Thus, Havana will likely have to find markets outside CMEA for up to 5.5 million tons of sugar--more than double current sales--if the 10 million ton production goal is attained.Cuba's key noncommunist hard currency sugar markets in 1979 included:

Canada	316,000 tons
Japan	300,000 tons
Iraq	243,000 tons
Algeria	203,000 tons
Syria	141,000 tons
All others	844,000 tons
Total	2,049,000 tons

In 1980 Mexico for the first time became a major importer as Cuban exports reached 400,000 tons. but purchases declined in 1981.

Among Cuba's customers, only Japan and Mexico offer substantial potential for expanding imports of sugar. However, high sugar prices have once again again stimulated Japanese interest in boosting frustose production, while a recovery of Mexican sugar production must be anticipated.

Cuba also faces a key multilateral constraint on its hard currency sugar exports; the International Sugar Agreement (ISA), which Havana helped design to restrict free market price swings through use of buffer stocks and export quotas. Under the ISA, Cuba's exports to free world markets are usually limited to 2.8 million tons. When high prices have exceeded the ISA ceiling, allowing quotas to be suspended, open competition thus prevails in world sugar trade. However, market equilibrium prices are likely to be within the ISA range during much of the 1981-85 period. Consequently, Cuba would face a difficult task in finding new hard currency markets for an additional 2.5 million tons, if its production goals are met.

In sum, if Cuba's trade orientation to CMEA continues, the outlook for sugar holds:

- o possible deterioration of terms of trade vis-a-vis CMEA, and especially for Soviet oil imports;
- o extreme difficulty in expanding hard currency markets; and
- o a consequent need to either limit production increases, accumulate unexportable surpluses, or repudiate the ISA and opt for open free market competition thereby risking a return to the wide price swings of the past.

Other Industries

Aside from sugar, CMEA development strategy as implemented in Cuba will continue to emphasize the nickel and citrus industries. Since Cuba has little to offer beside sugar, both products are welcomed by Cuba's CMEA trade partners in balancing, at least partly, their trade flows.

With Soviet and East European assistance, nickel production is being expanded from the current capacity of 38,000 tons to a goal of 70,000 tons by 1985. Approximately 75 percent of current production is exported to CMEA and half of the planned additional output is reportedly committed to repay investments. Thus, by 1985 Cuba could have a total of about 23 tons available for HC exports, about three times present capacity.

Cuba's nickel industry is based on two pre-revolution U.S.-built plants which, although substantially renovated by the Soviets, continue to be only marginally efficient by world industry standards. Both employ energy intensive processes for extracting nickel. The new Punta Gorda plant, under construction with Soviet assistance, will reportedly be more efficient than the existing plants but has been plagued by long delays and is unlikely to employ the most up-to-date technology and will likely be a heavy oil consumer.

Consequently, as in the past, the competitiveness of Cuban nickel in world markets will depend on the availability of subsidized Soviet

Table 9

Percent of Total Cuban Imports of Selected Products Supplied by CMEA Countries

Product	Source	Percent 1974	Percent 1976
Canned meat	CMEA	60	77
	USSR	42	64
	Bulgaria	18	13
Condensed milk	USSR	100	100
Butter	CMEA	100	100
	USSR	100	84
	GDR	--	16
Cheese	CMEA	100	100
	USSR	49	58
	Bulgaria	51	42
Fish	CMEA	89	84
	USSR	87	84
Ceral & Grain	CMEA	83	94
	USSR	83	82
	Bulgaria	--	12
Rice [1/]	USSR	29	62
Corn	CMEA	30	27
	USSR	27	21
	Bulgaria	3	6
Wheat flour	USSR	100	100
Animal feeds	USSR	35	26
Lard	CMEA	91	91
	USSR	59	43
	Bulgaria	24	31
	Poland	8	4
	Hungary	--	8
Beams, wooden	USSR	99	94
Cotton fiber	USSR	100	100
Petroleum and petroleum products	USSR	99.9	99.9

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Product	Source	Percent 1974	Percent 1976
Fertilizer	CMEA	74	95
	USSR	67	79
	Bulgaria	1	4
	GDR	6	12
Steel Plate	CMEA	43	78
	USSR	39	65
	Bulgaria	4	12
	Poland	1	1
Steel rods	CMEA	70	83
	USSR	56	65
	Bulgaria	14	18
Stationary disel engines	CMEA	98	82
	GDR	40	46
	USSR	28	35
	Czech	--	1
Ag implements	CMEA	27	7
	USSR	14	6
	Hungary	13	1
Machine tools	CMEA	80	63
	USSR	19	17
	Bulgaria	61	46
Irrigation pumps	USSR	93	38
Autos	USSR	29	18
Busses	USSR	72	76
Trucks	USSR	30	47

1/ China supplied 35% of Cuban rice imports in 1976.

Source: Anuario Statistico de Cuba.

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oil, the key element in production costs. Finally, faced with the prospect of possible strong future competition from seabed nickel, now in the development stage, the future economic viability of Cuba's nickel industry may well be limited.

Citrus production has remained stagnant at between 180-190,000 tons, and the production goal of 350,000 tons by 1980 clearly has not been met. Although substantial investments have been made in infrastructure for the industry, the quality of Cuban citrus has failed to meet world market standards. Consequently, virtually the entire export crop continues to be shipped to CMEA, especially the USSR, where chronic shortages always guarantee a market. Without further investment, technical assistance and specialized equipment, generally available only in the West, export markets will remain limited to CMEA.

Tourism

CMEA countries have not developed Cuba's traditional advantage in tourism. The USSR and Eastern Europe have themselves relied heavily on Western companies for investment and know-how in building tourism industries that meet world class standards. Cuba must therefore turn elsewhere for aid in developing its potential comparative advantage in this key service sector. Havana's primary tourism market is the U.S., but U.S. tourism to Cuba will continue to be constrained by the absence of normal relations and political tensions.

Prospects for Imports from CMEA

The outlook for Cuban imports from CMEA is not much more promising. Continuing past export patterns will insure chronic constraints on hard currency earnings and thus dependence on CMEA, particularly the USSR, for the bulk of essential imports. (See Table 9.) Prospects for expanding past import volumes are not good.

The Soviets supply the bulk of Cuban food imports, either directly (e.g. dry milk) or from third countries on Soviet account, (e.g. wheat and flour from Canada). Faced with increased need to import Western food supplies for its own population, Moscow is likely to strongly resist Cuban demands for more food aid.

The Soviets are able to supply only a portion of the raw material and intermediate products imported by Cuban industries.

Some key new plants, such as textiles, which Cuba has counted on for both domestic supply and exports, require substantial imported inputs from the West.

Eastern Europe is also likely to resist expanding exports to Cuba of key products. Popular discontent in Poland has sharply focused the attention of the CMEA leaders on the increasingly difficult task of improving (or at least maintaining) living standards of the population. Indeed, a key spark to Polish

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discontent was reported to be the discovery of canned meat products destined for Cuba, under fake labels as non-meat items. In this environment, Cuba's bargaining position for imports of consumer goods and food commodities faces continued erosion.

Havana will have to rely, more than ever, on Moscow's "encouragement" of Eastern Europe to supply needed products to Cuba. However, traditional arguments based on the Cuba's special needs as a less developed CMEA member are unlikely to be as persuasive as in the past.

Cuban Debt to CMEA

Prior to 1974, the CMEA countries extended economic aid to Cuba mainly in the form of trade credits and development grants. While Cuba's resulting debt obligations to Eastern Europe are not known, in 1986 Havana is scheduled to start repaying some $5.3 billion in interest-free debts due Moscow. Since repayments will be made in kind, (i.e., sugar shipments probably at subsidized prices), the real burden on Cuba is likely to be relatively small, though it will, nonetheless constitute a drain on Havana's always limited resources.

Cuban Hard Currency Debt and Trade Prospects

Further political and economic integration into CMEA will also insure continuation of the heavy burden of Cuba's hard currency debt, estimated at $2.6 billion in 1980. Assuming Havana was successful in rolling over all principal payments falling due, more than $200 million in interest charges alone were probably paid in 1980. In order to pay interest and reduce outstanding debt principal, Cuba would have to maintain a substantial surplus in its overall hard currency balance of trade, an unlikely possibility over the next five years assuming no change in the current trade orientation to CMEA.

With an even closer Havana identification with Moscow, Western banks and governments are unlikely to significantly increase lending to Cuba, though they may continue rolling over current debts. Thus, for the forseeable future, Cuba's hard currency import potential will be determined almost solely by its export earnings plus any hard currency loans or grants Havana can squeeze from CMEA, less interest due on debts to the West. But, with the exception of a modest sugar windfall in 1980-81, Cuba's hard currency export prospects through 1985 are not very attractive under a close CMEA alignment.

Havana is unlikely to succeed in diversifing the product composition of its hard currency exports. Moreover, prospects for expanding Cuba's export market for its existing product mix will not be enhanced because economic dependence on Moscow is likely to necessitate close Cuban identification with Soviet foreign policy objectives that conflict with the interests of the Western

industrialized countries. In this environment, Cuba's prospects for gaining access to the large U.S. export market are extremely dim. Moreover, continuation of the U.S. embargo will also significantly hamper Cuba's possibilities for expanding trade with other Western countries. Perhaps most important for the long term, Cuba's possibilities for direct investment to develop new industries will be extremely limited, since their viability would likely depend on direct export access to the massive U.S. market.

Further integration into CMEA is, therefore, unlikely to allow substantial change in either the composition or flow patterns of Cuban hard currency exports. Consequently, swings in the price of sugar will continue to be the key determinant of hard currency income and, as in the past, will constrain the pace and increase the uncertainty of overall economic development.

Although the resulting volatility makes projecting Cuban hard currency trade difficult, the following calculations illustrate the parameters Cuba faces barring a switch from its trade orientation to CMEA. Record high sugar prices in 1975 were primarily responsible for peak export earnings of $1.6 billion in 1975 (see table 10). But export and import growth rates over the 1975-79 period were actually negative (-2.3 and -2.2 percent respectively) as Cuba shifted its trade toward CMEA after 1975. Given Cuba's already large hard currency debt (2.7 billion, or 3 times its 1979 hard currency exports), future hard currency imports must closely parallel an export performance that is likely to be erratic, mirroring sugar price swings.

Table 10 provides illustrative import growth rates and matching export growth rates that would be required to stem growth in hard currency debt. For example, were hard currency imports to grow to 10 percent annually in nominal terms, exports would have to grow at 16.4 percent to stabilize debt at $3.0 billion by the end of 1983. The required 1983 export level of $1.6 billion, would necessitate exports of 2.5-3 million tons of sugar at 19 to 23 cents per pound. While exports and prices in or above this range are likely to be achieved or surpassed in 1980-81, such favorable market conditions are unlikely to persist over the multi-year period required for Cuba to stem growth of its debt while increasing imports 10 percent annually through 1983. In view of Cuba's negative 2.3 percent export performance over the 1975-79 period, optimism is not justified.

But is even a 10 percent import growth adequate to meet the needs of Cubans industry and consumer? Compared to the dismal -1.4 percent rate of 1975-79, it would appear to be. However, the adverse impact on living standards of that negative growth rate was probably offset by a 15 percent annual increase in the value of imports from CMEA. In particular, the steady rise in subsidized food imports from the USSR preserved popular consumption at minimal levels. Considering the economic difficulties confronting the East European countries, future similar volumes of food imports at these levels from CMEA would seem doubtful.

Table 10

Projected End 1983 and End 1985 Hard Currency Trade
and Debt Levels Under Selected Trade Growth
and Interest Rate Assumptions

Year	Assumptions			Balancing	End Year Amounts in Billions of $					Debt
	X Growth Rate	M Growth Rate	Interest Rate	Export Growth Rate	Export	Import	Trade Balances	Interest	Debt	Export Ratio
1983	-	10	. 10	14.7	1557	1391	166	323	3311	2.13
		15	10	19.3	1821	1662	159	326	3353	1.84
1985	-	10	10	13.2	1896	1683	213	363	3705	1.95
		15	10	17.8	2404	2197	207	371	3797	1.58

Also, the above projections implicitly assume that future inflation will affect imports and exports equally. But Cuba essentially exports non-energy raw materials and agricultural commodities while importing manufactured goods. Havana, therefore, is likely to face a declining hard currency terms-of-trade. Consequently, achieving a 10 percent annual growth in imports could necessitate export growth rates in real terms substantially greater than the 16.4 percent projected above. Finally, a 10 percent annual growth in imports may prove less than adequate, since hard currency import products are in particular demand by Cuba's labor force which is growing rapidly at 3.5 percent annually.

In summary, under a regime of continued integration into CMEA, the outlook for Cuban hard currency trade is bleak. The export growth rates required to finance adequate import levels and manage the external debt burden are unlikely to be consistently achieved.

Improved Economic Efficiency

Improved economic efficiency would probably include the following minimal objectives:

- o greater efficiency in allocation of resources to fulfill socio-economic goals and provide for adequate living standard;
- o fully develop comparative advantage in structuring foreign trade.
- o maximize flexibility to insure effective response to external and internal economic change.

Can Soviet style central planning accomplish these objectives for the Cuban economy? After 10 years of application, is the Soviet model adaptable to a small developing economy, highly dependent on foreign trade?

Characterizing Cuba as a centrally planned economy prior to 1974 was largely a sham. Although multilayered bureaucratic organizations had been created, effective control of operating enterprises was only rarely achieved in a few key operating enterprises. Things began to change in 1974-76 as Havana planners drew up the first comprehensive five year plan, under the close tutoring of Soviet technocrats. As an adjunct to the plan, beginning in 1977, a new system of economic management (calculo economio) was imposed to enforce cost accounting and meaningful economic profitability standards on enterprise managers. Subsequent changes included funding enterprise operations with interest-bearing central bank loans, rather than nonrepayable national budget grants; salary reforms that tied pay directly to productivity and, most recently, granting substantial hire and fire autonomy to many enterprise managers. Similar trends in decentralizing economic administration were reflected in the opening of free farmers markets in April 1980 to overcome chronic inefficiencies in the state run food distribution system.

Most of the reforms Cuba is now implementing have been tried in the Soviet economy, generally with unsatisfactory results. In contrast, some of the smaller East European economies, especially those most heavily dependent on foreign trade with the West, have been far more successful in promoting economic efficiency through decentralized management. In most cases, the key mechanism for economic administration is the price system. Enterprise managers must be guided by realistic, flexible prices that both reflect the cost of resources and respond to changes in market supply and demand.

In the Soviet Union, the failure to modify the system of centralized price administration has limited the impact of economic reforms. Managers continue to respond only to administrative directives which cannot mandate the most efficient allocation of resources. For the open Cuban economy (trade is 70 percent of GDP) effective internal prices must directly reflect world market prices. As long as more than three-fourth or more of its trade is conducted within CMEA, on the basis of preplanned delivery of physical quantities at fixed and subsidized prices, Cuba seems destined to repeat Soviet failures in attempts at economic reform. Even the best technocrats in Havana's State Committee on Prices are unlikely to succeed in providing enterprise managers and consumers with the price signals they need to make efficient decisions in allocating resources.

Foreign Trade Management

Cuba's foreign trade planners face mounting difficulties that go beyond the inadequacy in quantity and quality of products available from its CMEA trade partners. In addition to pricing problems, intra-CMEA trade is plagued by inefficiencies which have cost the Cubans heavy, though unquantifiable losses.

As in the most CPEs, Cuban foreign trade is controlled by a central ministry, with 40 importing and exporting enterprises operating on the basis of pre-set targets in the annual trade plan. Management of intra-CMEA trade involves little flexibility once delivery volumes and terms are set in annual agreements with each trade partner country. There is little a trading enterprise can do to overcome the substantial delivery delays that are endemic in intra-CMEA trade.

In contrast, managing Cuban hard currency trade, where key export and import products are dependent on volatile commodities markets, often requires a rapid response to world market developments to make the most efficient use of scarce hard currency resources. Dealing with both markets simultaneously has caused expensive foul-ups for Cuban trading enterprises. For example, anticipating continued high sugar earnings in 1975-76, Havana's traders seriously overextended commitments for hard currency imports, necessitating contract cancellations and disruption of trade flows.

Cuba's trade structure also complicates inventory management, a chronic source of waste in the economy. Because of long lead times in negotiating imports from CMEA, inventories tend to be either

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excessive or nonexistent, while the need to husband limited hard currency resources forces enterprises to hold minimal supplies of goods imported from the West. Enterprise operations are frequently interrupted due to recurring shortages of import items and, as a result, the availability of consumer products--even rationed necessities--has been haphazard.

These systemic problems have also been greatly exacerbated by Cuba's inability to trade with its closest natural trading partner, the U.S., which could be an efficient supplier of virtually everything Cuba imports and a ready market for its exports.

Unemployment

A key factor in improving efficiency in the Cuban economy is more productive use of a relatively well-educated labor force that is growing rapidly. Prior to the 1980 Mariel exodus, overt unemployment reached an estimated 6 percent. But Cuba's employment dilemma is even more serious given the of pervasive underemployment of labor in marginally productive jobs and the counterproductive, pervasive administrative bureaucracy.

Over the next few years, Cuba will confront serious structural unemployment because the predominantly agriculture based economy is increasingly unable to generate the white collar, technical jobs expected by the growing army of graduates from an impressive education system. Technical and professional student enrollment reached 220,000 in 1980 and youths now view a higher education as virtually an entitlement to, as well as a prerequisite for, attractive employment.

In addition, the economy must absorb large numbers of youths who expect favored placement on completing their required military or "internationalist" service.

Cuba's labor problems may also be aggravated by recent economic reforms. To promote efficiency, enterprise managers are being allowed new autonomy in deployment of labor resources, including hire/fire authority and salaries linked to productivity. As a result, managers will have direct incentives to economise on labor and eliminate marginal jobs precisely when structural unemployment and underemployment are growing problems.

The kind of employment required by Cuba's growing labor force seems most unlikely to be generated by further integration in the CMEA system. The concentration of CMEA supplied investments in sectors where Cuba has a comparative advantage vis-a-vis the other CMEA countries will perpetuate the reliance on traditional industries, e.g. sugar, nickel, and citrus, where technical and skilled jobs comprise only a small portion of total employment.

In 1978, Cuban planners hit on what some view as an optimal solution to their labor surplus--export it. Currently 15-20,000 Cuban technicians and skilled workers are employed in construction

projects in two dozen third world countries, especially in economies short of skilled workers, like Libya and Iraq. While many of these represent Cuban foreign assistance, some are Cuban "gastarbeiters" who generate up to $100 million in hard currency income annually. However, future employment opportunities abroad for Cubans are likely to be limited by:

- o increasing importance throughout the Third World of providing training and employment for the domestic labor force whose members often resent losing jobs to foreign workers;
- o political impediments to accepting Cuban personnel in view of Havana's close identification with the Soviet Union;
- o competition from other labor exporting countries, (especially South Korea, Turkey, and possibly China), with technical skills and equipment support superior to Cuba; and
- o problems in reassimilating returnees into the domestic Cuban labor force.

Fidel Castro has suggested another possibility--exporting labor to the chronically labor-short CMEA countries, especially the U.S.S.R. Plans are reportedly underway to send 10,000 Cubans to Siberia to cut timber for export to Cuba. They would join the estimated 7-10,000 Cubans already working in European CMEA countries. If Cuba actually becomes substantial source of "gastarbeiters" for CMEA, the economic gains to Cuba are likely to prove marginal. CMEA countries will pay for Cuban labor "in kind" through bilateral trade flows, and as always, they will be reluctant to export high quality products that are already short at home. In particular, the food and consumer goods Cuba needs are the most unlikely forms of payment for labor supplied to CMEA.

In the case of Soviet timber, sending Cubans to Siberia is unlikely to provide any added assurance of delivery on future export contracts because the bottleneck is the inadequate Soviet transport system, rather than a shortage of able-body laborers or axes!

The establishment of new labor-intensive manufacturing industries would appear to be the only effective long-term solution to Cuba's unemployment problems. If production were high quality, such industries could also lead diversification and growth in exports to both hard currency and CMEA markets. However, the CMEA development program offers little prospect for investment in the kinds of industries capable of utilizing Cuba's labor resources. All CMEA members are striving to develop their own high quality export industries, but with few exceptions, they lack the technology, the organization and the incentive systems required for success.

Improved Living Standards

The average Cuban's material well-being improved during the 1960s as income was redistributed by the new revolution. However, GNP growth in real terms during the 1970s averaged only 2.5-3 percent, or about 1 percent per capita. Moreover, this slow growth has been uneven with the result that current availability of consumer staples, e.g. sugar, rice, beef, and coffee, clothing, is less than in 1970. (Table 11). Havana also has not been able to maintain existing housing, much less accomplish ambitious goals for new construction.

The social impact of slow economic growth in the 1970s was partly mitigated by an implicit "social compact", between the Cuban leadership and population based on a highly egalitarian income distribution and (more or less) guaranteed availability of necessities at highly subsidized prices. Over the last decade salaries have been tied to skill levels and currently range from 200 pesos monthly for common labor to 450 for top professionals. Food and basic consumer items have been rationed at low prices, and utilities, rent, transport, medical care, and education have been highly subsidized or provided free.

However, over time Cuba's "social compact" based on austerity shared equally, has had a perverse effect on economic performance. Labor motivation has been retarded and hobbled the economy with low productivity and chronic absenteeism. These problems worsened in the 1970s, prompting direct attention of the leadership. In 1979, both Fidel and Raul Castro publically blasted inefficiency, mismanagement, and cronyism. In November, a reshuffle of key economic ministries was carried out, followed by salary reforms to increase differentials and link pay more closely with productivity.

More importantly, however, the "social compact " has been eroded as consumer goods have been moved from rationed to "parallel" markets where larger quantities can be bought, albeit at very high prices. The change has been substantial. (See Table 12). In 1970, 94 percent of the 274 types of consumer goods available were rationed, but by 1980, only 21 percent of 874 products were controlled. The new free farmers markets, set up in April 1980, have accelerated the trend away from rationing.

While these economic reforms indicate pragmatism and a lack of rigid commitment to Soviet style management on the part of the Cuban leadership, chances for success remain uncertain. The outlook for Cuban consumers, assuming further integration into CMEA, is equally unclear.

The free farmer's markets may provide incentives and increase production of food. However, it is unclear whether the real income of private farmers will be offset by sharply higher prices charged them for non-food items, farm equipment, fertilizers, etc. Because Cuba's revolutionary society is based on equalized austerity, the rise of new class of wealthy "laftifundistas" probably cannot be

Table 11

PER CAPITA MONTHLY CONSUMPTION OF KEY FOOD AND CONSUMER PRODUCTS
(Pounds Per Capita)

	1971	1975	1976	1977	1978
Food Products					
Beans	1.9	1.8	2.0	1.8	1.9
Rice	8.3	8.2	7.5	6.9	7.3
Beef	2.0	1.2	1.4	1.5	1.5
Other Meat	1.8	3.0	2.9	2.9	3.1
Sugar	8.6	5.7	6.6	6.8	6.8
Cooking Oil or Lard	2.3	2.4	2.4	2.3	2.4
Coffee	0.6	0.5	0.5	0.3	0.3
Fruits	6.1	9.2	10.2	9.2	9.1
Vegetables	4.6	7.3	7.3	5.7	5.6
Root Crops	3.7	6.7	6.7	6.1	8.2
Fish	1.8	2.0	2.0	1.7	1.9
Eggs (units)	13.7	14.6	14.6	14.3	14.8
Bread	8.2	8.1	8.0	5.7	7.3
Tobacco (units)	2.2	2.3	2.2	2.1	2.2
Consumer Goods					
			(1965 Index=100)		
Clothing	67.7	97.9	82.9	78.3	78.2
Leather Shoes	120.5	129.4	120.7	112.4	123.1

Source: Official Cuban Data.

TABLE 12

PRODUCT DISTRIBUTION THROUGH THE RATIONING SYSTEM
COMPARED TO OTHER OFFICIAL CHANNELS

	1971	1977	1978
Beans			
% Rationed	71.1	65.5	65.5
% Other Channels	28.9	34.5	34.5
Rice			
% Rationed	76.9	70.9	70.9
% Other Channels	23.1	29.1	29.1
Sugar			
% Rationed	79.0	73.1	71.4
% Other Channels	21.0	26.9	28.6
Cooking Oil and Lard			
% Rationed	69.1	66.8	64.8
% Other Channels	30.9	33.2	35.2
Red Meat			
% Rationed	92.3	85.4	86.2
% Other Channels	7.7	14.6	13.8
Eggs			
% Rationed	70.5	68.0	64.2
% Other Channels	29.5	32.0	35.8
Fruits			
% Rationed	46.4	54.6	53.4
% Other Channels	53.6	45.4	46.6
Vegetables			
% Rationed	56.6	46.5	43.1
% Other Channels	43.4	53.5	56.9

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	1971	1977	1978
Root Crops			
% Rationed	72.6	72.0	70.3
% Other Channels	27.4	28.0	29.7
Dairy Products			
% Rationed	87.6	76.8	75.5
% Other Channels	12.4	23.2	24.5
Seafood			
% Rationed	55.3	50.3	46.9
% Other Channels	44.7	49.7	53.1
Bread			
% Rationed	100.0	75.9	69.9
% Other Channels	0.0	24.1	30.1

Source: Official Cuban Data.

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tolerated. Consequently, the new real income incentives and higher food production are not likely to be sustained.* Cuba is, therefore, unlikely to achieve self-sufficiency in food production and will remain dependent on CMEA (and hard currency) imports for at least one-third of essential foodstuffs.

The USSR supplies virtually all Cuban needs for wheat, flour, corn, rice, and lard. (See Table 9). However, since all these products are either in short supply or not grown in the USSR, Moscow has had to procure supplies for Cuba from world markets. Feeding Cubans cost Moscow an estimated $200 million in hard currency in 1979.

Confronting food shortages of its own in 1980 and possibly beyond, Soviet willingness to continue subsidizing Cuban consumption at levels already approaching that of the average Russian (2800 vs. 3300 calories) could diminish. Moreover, in the wake of recent events in Poland, East European countries will probably be even more reluctant than usual to continue subsidizing Cuban consumption.

Although the diet of the average Cubans probably improved in 1980-81 as the leadership used part of the hard currency windfall from high sugar prices to finance food imports, such improvement could heighten popular expectations that are certain to be frustrated as sugar cycle turns down. That scenario occurred in 1974-79. With a continued reliance on CMEA and sugar hard currency earnings to finance imports of food and consumer goods, a replay seems inevitable.

Conclusion: Prospects for Cuba in CMEA

Cuba's economic integration into CMEA, begun in earnest in 1972, provided an essential underpinning that made possible significant social advances. However, the availability from CMEA of raw materials and other imports--especially energy--at heavily subsidized prices has allowed Cuba to pursue economic development with little concern for the efficient use of resources.

In the 1980s the era of extensive growth based on ever expanding resource transfers from CMEA--and especially the USSR--is likely drawing to a close. In this environment, Havana's avowed pursuit of closer integration with CMEA, so strongly reaffirmed at the Second Party Congress, is unlikely to achieve a level of economic advance necessary to maintain (much less improve) the living standards of the Cuban population. Energy constraints and dependence on traditional sectors, especially an overwhelming reliance on sugar,

*In his speech to the Party Congress, Castro noted a new tax system for peasants is "under consideration."

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will continue to condemn Cuba to a stop-go cycle of economic development, inevitably linked to volatile swings in world sugar markets. Consequently, CMEA aid may continue to protect the Cuban revolution from economic disaster, but only just. For the average Cuban, the outlook is for more austerity--perhaps interrupted by small periodic advances when the sugar price swings upward. On the other hand, if shortfalls occur in Soviet energy supplies, an austerity scenario will prove to be the best outcome Havana can anticipate.